

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

CHO, In-jae

NEWKOREA INTERNATIONAL PATENT & LAW  
OFFICE 3rd Fl., Janghyun Bldg., 637-23, Yeoksam-dong,  
Gangnam-gu Seoul 135-909 Republic of Korea

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year)

15 DECEMBER 2005 (15.12.2005)

Applicant's or agent's file reference

PP05-0138

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/003164

International filing date (day/month/year)

23 SEPTEMBER 2005 (23.09.2005)

Priority date(day/month/year)

24 SEPTEMBER 2004 (24.09.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 G02F 1/1335

Applicant

LG CHEM, LTD. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION


If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.  
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.



Name and mailing address of the ISA/KR

 Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon  
302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Date of completion of this opinion

14 DECEMBER 2005 (14.12.2005)

Authorized officer

LIM, Hyun Suk

Telephone No. 82-42-481-8267



**WRITTEN OPINION OF THE  
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International application No.

PCT/KR2005/003164

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ on paper  
☐ in electronic form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	2-17, 19-20	YES
	Claims	1, 18	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

**2. Citations and explanations :**

D1 : JP 13-129927 A (2001.05.25)  
D2 : JP 15-185845 A (2003.07.03)

The present invention relates to an optical compensator film for an LCD designed to improve wide view angle. Especially, claims 1-17 contain the polymer base layer, the protective layer coated with organic/inorganic hybrid composition and the compensator film with multilayer structure which simultaneously comprises negative phase difference and phase difference with the face in the thickness direction. Claims 18-20 describe an LCD apparatus including the said compensator film.

**1. Novelty:**

None the cited prior arts describe the compensator film with multi-layer structure which comprises both negative phase difference and phase difference within the face in the thickness direction. Therefore, claims 1-20 comply with Article 33(2) PCT.

**2. Inventive Step:**

D1 discloses a liquid crystal display apparatus using the optical film and the LCD film including the protective layer. This device has such a characteristic that the phase difference value of the fatty acid cellulose ester film is 60nm - 250nm in the thickness direction represented by formula:  $Rt = (n_x + n_y) / 2 - n_z \times d$ .

D2 discloses a polarizing plate of an LCD that hardly generates uneven brightness, in which a transparent protective layer is laminated on at least a surface of a polarizing film.

(To be continued in the Supplemental Box)

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**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**  
Continuation of:

(Citations and explanations)

When comparing the present invention with D1 & D2, the characteristic composition of the claimed invention, which comprises the protective layer coated with organic/inorganic, hybrid composition and the polymer coated layer of which the phase difference value in the thickness direction represented by formula:  $R_t = (n_z - (n_x + n_y)/2) \times d$  is a negative signal, can be easily invented by a person skilled in the art through the compositional combination of D1 ( the composition of fatty acid cellulose ester film and protective layer ) and D2 ( composition of a transparent protective layer ). Thus, the present invention lacks an inventive step. Claims 1, 18 do not fulfill the requirements of Article 33(3) PCT.

3. Industrial Applicability:

Claims 1-20 fulfill the requirements of Article 33(4) PCT.

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.  
Continuation of :